WHAT IS CLAIMED IS:

1. A nanolayered coated member comprising:

a substrate having a surface and a coating on the surface of the substrate;

the coating comprising a plurality of coating sets of nanolayers wherein each coating set comprising alternating nanolayers of a metal nitride and a metal aluminum nitride;

the coating including a bonding region and an outer region; and

the bonding region comprising a plurality of the coating sets wherein the thickness of the coating sets increase as one moves away from the surface of the substrate.

2. The coated member according to claim 1 wherein the metal is selected from the group comprising titanium, niobium, hafnium, vanadium, tantalum, molybdenum, zirconium, chromium and tungsten alone or in combination with each other or in combination with other metals.

3. The coated member according to claim 1 wherein the substrate is selected from the group comprising cemented carbide, cermet, ceramic, high speed steel, diamond, polycrystalline diamond, and polycrystalline cubic boron nitride.

4. The coated member according to claim 1 wherein the coating has a thickness ranging between about 1 micrometer and about 21 micrometers.

5. The coated member according to claim 1 wherein the bonding region has a thickness ranging

between about 0.025 micrometers and about 0.6 micrometers.

6. The coated member according to claim 1 wherein the bonding region has a thickness ranging between about 0.05 micrometers and about 0.4 micrometers.

7. The coated member according to claim 1 wherein each one of the metal nitride nanolayers and each one of the metal aluminum nitride nanolayers in the bonding region has a thickness between about 0.5 nanometers and about 5 nanometers.

8. The coated member according to claim 1 wherein each one of the metal nitride nanolayers and each one of the metal aluminum nitride nanolayers in the bonding region has a thickness between about 0.5 nanometers and about 2 nanometers.

9. The coated member according to claim 1 wherein the outer region has a thickness ranging between about 1 micrometer and about 20 micrometers.

10. The coated member according to claim 1 wherein each one of the metal nitride nanolayers and each one of the metal aluminum nitride nanolayers in the outer region has a thickness between about 0.5 nanometers and about 20 nanometers.

11. The coated member according to claim 1 wherein each one of the metal nitride nanolayers and each one of the metal aluminum nitride nanolayers in the outer region has a thickness between about 0.5 nanometers and about 10 nanometers.

12. The coated member according to claim 1 wherein each one of the metal nitride nanolayers and each one of the metal aluminum nitride nanolayers in the bonding region has a thickness between about 0.5 nanometers and about 2 nanometers.

13. The coated member according to claim 1 wherein the metal is titanium, and for each of the coating sets the titanium aluminum nitride nanolayer having a thickness and the titanium nitride nanolayer having a thickness, and the thickness of the titanium aluminum nitride nanolayer being different from the thickness of the titanium nitride nanolayer.

14. The coated member according to claim 1 wherein the metal is titanium, and for each of the coating sets the titanium aluminum nitride nanolayer having a thickness and the titanium nitride nanolayer having a thickness, and the thickness of the titanium aluminum nitride nanolayer being greater than the thickness of the titanium nitride nanolayer.

15. The coated member according to claim 14 wherein the thickness of the titanium nitride nanolayer remains substantially the same as one moves away from the surface of the substrate.

16. The coated member according to claim 13 wherein each nanolayer of the titanium nitride in the bonding region has a thickness ranging between about 0.5 nanometers and about 2 nanometers.

17. The coated member according to claim 13 wherein each nanolayer of the titanium aluminum nitride in the bonding region has a thickness ranging between about 0.5 nanometers and about 11 nanometers.

18. The coated member according to claim 13 wherein each nanolayer of titanium nitride in the outer region has a thickness ranging between about 0.5 nanometers and about 2 nanometers.

19. The coated member according to claim 13 wherein each nanolayer of titanium aluminum nitride in the outer region has a thickness ranging between about 0.5 nanometers and about 11 nanometers.

20. The coated member according to claim 1 wherein for each of the coating sets in the bonding region the thickness of the metal nitride nanolayer being different from the thickness of the metal aluminum nitride nanolayer.

21. The coated member according to claim 20 wherein for each of the coating sets in the bonding region, the metal aluminum nitride nanolayer having a greater thickness than the thickness of the metal nitride nanolayer.

22. The coated member according to claim 1 wherein for each of the coating sets in the outer region the thickness of the metal nitride nanolayer being different from the thickness of the metal aluminum nitride nanolyer.

23. The coated member according to claim 22 wherein for each of the coating sets in the outer region, the metal aluminum nitride nanolayer having a greater thickness than the thickness of the metal nitride nanolayer.

24. The coated member according to claim 22 wherein for each of the coating sets in the outer region the thickness of the metal aluminum nitride

nanolayer being at least about five times as great as the thickness of the metal nitride nanolayer.

25. The coated member according to claim 1 wherein the coated member comprising one of the following: a cutting insert, an indexable cutting insert, a drill, a milling cutter, an end mill, a reamer, and a tap.

26. The coated member according to claim 1 wherein the outer region comprising a plurality of the coating sets wherein the thickness of each one of the coating sets is about equal.

27. The coated member according to claim 1 further including a finishing layer applied to the outer surface of the coating.

28. The coated member according to claim 27 wherein the finishing layer comprising one or more layers of one or more of the following: alumina, and nitrides, aluminum nitrides and aluminum carbonitrides of one or more of titanium, niobium, hafnium, vanadium, tantalum, zirconium, chromium alone or in combination with each other or in combination with other metals.

29. The coated member according to claim 27 further including a lubricous coating on the finishing coating.

30. The coated member according to claim 1 wherein in the metal aluminum nitride nanolayer the aluminum/titanium atomic ratio ranges between about 0.2 to about 2.5.

31. The coated member according to claim 30 wherein the aluminum/titanium atomic ratio is greater than zero and less than 1.0.

32. The coated member according to claim 31 wherein the aluminum/titanium atomic ratio is greater than 0.2 and less than 0.9.

33. The coated member according to claim 30 wherein the aluminum/titanium atomic ratio is equal to or greater than 1.0 and less than 2.5.

34. The coated member according to claim 1 wherein the metal nitride nanolayer including aluminum therein, and the composition of the aluminum-containing metal nitride nanolayer being different from the composition of the metal aluminum nitride nanolayer.

35. The coated member according to claim 34 wherein the aluminum content in the aluminum-containing metal nitride nanolayer being less than the aluminum content in the metal aluminum nitride nanolayer.

36. The coated member according to claim 35 wherein the metal is titanium.

37. A nanolayered coated member comprising:

a substrate having a surface and a coating on the surface of the substrate;

the coating comprising a plurality of coating sets of nanolayers wherein each coating set comprising alternating nanolayers of a metal aluminum nitride and a metal aluminum carbonitride;

the coating including a bonding region and an outer region; and

the bonding region comprising a plurality of the coating sets wherein the thickness of each coating

set increases as one moves away from the surface of the substrate.

38. The coated member according to claim 37 wherein the metal is selected from the group comprising titanium, niobium, hafnium, vanadium, tantalum, molybdenum, zirconium, chromium and tungsten alone or in combination with each other or in combination with other metals.

39. The coated member according to claim 37 wherein the substrate is selected from the group comprising cemented carbide, cermet, ceramic, high speed steel, diamond, polycrystalline diamond, and polycrystalline cubic boron.

40. The coated member according to claim 37 wherein for each of the coating sets in the bonding region the thickness of the metal aluminum nitride nanolayer being different from the thickness of the metal aluminum carbonitride nanolayer.

41. The coated member according to claim 37 wherein for each of the coating sets in the outer region the thickness of the metal aluminum nitride nanolayer being different than the thickness of the metal aluminum carbonitride nanolayer.

42. The coated member according to claim 37 wherein the outer region comprising a plurality of the coating sets wherein the thickness of each coating set is about equal.

43. The coated member according to claim 37 wherein the coated member comprising a cutting insert, the cutting insert having a rake surface and a flank

surface, the rake surface and the flank surface intersecting to form a cutting edge.

44. The coated member according to claim 37 wherein the metal is titanium, and for each of the coating sets the titanium aluminum nitride nanolayer having a thickness and the titanium aluminum carbonitride nanolayer having a thickness, and the thickness of the titanium aluminum nitride nanolayer being different from the thickness of the titanium aluminum carbonitride nanolayer.

45. The coated member according to claim 37 further including a finishing layer applied to the outer surface of the coating.

46. The coated member according to claim 45 wherein the finishing layer comprises one or more of the following: alumina, and nitrides, aluminum nitrides and aluminum carbonitrides of one or more of titanium, niobium, hafnium, vanadium, tantalum, zirconium, chromium alone or in combination with each other or in combination with other metals.

47. The coated member according to claim 37 further including a lubricious coating on the finishing coating.

48. The coated member according to claim 37 wherein in the metal aluminum nitride nanolayer the aluminum/titanium atomic ratio ranges between about 0.2 to about 2.5, and in the metal aluminum carbonitride nanolayer the aluminum/titanium atomic ratio ranges between about 0.2 and about 2.5.

49. The coated member according to claim 48 wherein the aluminum/titanium atomic ratio in the metal

aluminum nitride nanolayer is greater than zero and less than 1.0, and the aluminum/titanium atomic ratio in the metal aluminum carbonitride nanolayer is greater than zero and less than 1.0.

50. The coated member according to claim 49 wherein the aluminum/titanium atomic ratio in the metal aluminum nitride nanolayer is between 0.2 and 0.9, and the aluminum/titanium atomic ratio in the metal aluminum carbonitride nanolayer is between 0.2 and 0.9.

51. The coated member according to claim 37 wherein in the metal aluminum nitride nanolayer the aluminum/titanium atomic ratio ranges between greater than 1.0 and less than 2.5, and in the metal aluminum carbonitride nanolayer the aluminum/titanium atomic ratio ranges between greater than 1.0 and less than 2.5.

52. A nanolayered coated member comprising:

a substrate having a surface and a coating on the surface of the substrate;

the coating comprising a plurality of coating sets of nanolayers wherein each set comprising alternating nanolayers of a metal nitride and a metal aluminum nitride and a metal aluminum carbonitride;

the coating including a bonding region and an outer region; and

the bonding region comprising a plurality of the coating sets wherein the thickness of each coating set increases as one moves away from the surface of the substrate.

53. The coated member according to claim 52 wherein the metal is selected from the group comprising titanium, niobium, hafnium, vanadium, tantalum,

molybdenum, zirconium, chromium and tungsten alone or in combination with each other or in combination with other metals.

54. The coated member according to claim 52 wherein the substrate is selected from the group comprising cemented carbide, cermet, ceramic, high speed steel, diamond, polycrystalline diamond, and polycrystalline cubic boron nitride.

55. The coated member according to claim 52 wherein for each of the coating sets in the bonding region the thickness of the metal nitride nanolayer being different from the thickness of the metal aluminum nitride nanolayer, the thickness of the metal nitride nanolayer being different from the thickness of the metal aluminum carbonitride nanolayer, and the thickness of the metal aluminum nitride nanolayer being different from the thickness of the metal aluminum carbonitride nanolayer.

56. The coated member according to claim 52 wherein for each of the coating sets in the outer region the thickness of the metal nitride nanolayer being different from the thickness of the metal aluminum nitride nanolayer, the thickness of the metal nitride nanolayer being different from the thickness of the metal aluminum carbonitride nanolayer, and the thickness of the metal aluminum nitride nanolayer being different form the thickness of the metal aluminum carbonitride nanolayer.

57. The coated member according to claim 52 wherein the outer region comprising a plurality of the coating sets wherein the thickness of each coating set is about equal.

58. The coated member according to claim 52 wherein the coated member comprising one of the following: a cutting insert, an indexable cutting insert, a drill, a milling cutter, an end mill, a reamer and a tap.

59. The coated member according to claim 52 further including a finishing layer applied to the outer surface of the coating.

60. The coated member according to claim 59 wherein the finishing layer comprising one or more layers of one or more of the following: alumina, and nitrides, aluminum nitrides and aluminum carbonitrides of one or more of titanium, niobium, hafnium, vanadium, tantalum, zirconium, chromium alone or in combination with each other or in combination with other metals.

61. The coated member according to claim 59 further including a lubricious coating on the finishing coating.

62. The coated member according to claim 52 wherein in the metal aluminum nitride nanolayer the aluminum/titanium atomic ratio ranges between about 0.2 to about 2.5, and in the metal aluminum carbonitride nanolayer the aluminum/titanium atomic ratio ranges between about 0.2 and about 2.5.

63. The coated member according to claim 62 wherein the aluminum/titanium atomic ratio in the metal aluminum nitride nanolayer is greater than zero and less than 1.0, and the aluminum/titanium atomic ratio in the metal aluminum carbonitride nanolayer is greater than zero and less than 1.0.

64. The coated member according to claim 63 wherein the aluminum/titanium atomic ratio in the metal aluminum nitride nanolayer is between 0.2 and 0.9, and the aluminum/titanium atomic ratio in the metal aluminum carbonitride nanolayer is between 0.2 and 0.9.

65. The coated member according to claim 52 wherein in the metal aluminum nitride nanolayer the aluminum/titanium atomic ratio ranges between greater than 1.0 and less than 2.5, and in the metal aluminum carbonitride nanolayer the aluminum/titanium atomic ratio ranges between greater than 1.0 and less than 2.5.

66. The coated member according to claim 52 wherein the metal nitride nanolayer including aluminum therein, and the composition of the aluminum-containing metal nitride nanolayer being different from the composition of the metal aluminum nitride nanolayer.

67. The coated member according to claim 66 wherein the aluminum content in the aluminum-containing metal nitride nanolayer is less than the aluminum content in the metal aluminum nitride nanolayer.

68. The coated member according to claim 67 wherein the metal is titanium.

69. A process for making a nanolayered coated member, the process comprising the steps of:

providing a substrate having a surface;

providing a metal target;

providing a metal aluminum target;

rotating a substrate between the metal target and the metal aluminum target;

supplying electrical power at a first level to the metal target;

supplying electrical power at the first level to the metal aluminum target;

depositing a coating comprising coating sets of alternating nanolayers on the surface of the substrate;

changing the deposition rate of the alternating nanolayers over a selected period of time during which electrical power supplied to the metal target and the metal-aluminum target changes from the first level to a second level; and

controlling the deposition rate of the alternating nanolayers for a period of time after the electrical power reaches the second level.

70. The process according to claim 69 wherein the alternating nanolayers comprise a metal nitride and a metal aluminum nitride.

71. The process according to claim 69 wherein the alternating nanolayers comprise a metal nitride and a metal aluminum nitride, the depositing step includes depositing a plurality of coating sets of the alternating nanolayers during the time the electric power to the metal target and to the metal aluminum target changes from the first to the second level so as to deposit a bonding region of the coating.

72. The process according to claim 71 wherein each coating set included in the bonding region has a thickness, and the thickness of the coating sets in the bonding region increases as one moves away from the surface of the substrate.

73. The process according to claim 69 the depositing step includes depositing a plurality of the coating sets of the alternating nanolayers during the time after the electrical power has reached the second level so as to deposit an outer region of the coating.

74. The process according to claim 73 wherein each coating set included in the outer region has a thickness, and the thickness of each one of the coating sets remaining about equal.

75. The process according to claim 73 wherein for the outer region the metal nitride nanolayer has a thickness and the metal aluminum nitride nanolayer has a thickness, and the thickness of the metal aluminum nitride nanolayer being different from the thickness of the metal nitride nanolayer.

76. The process according to claim 70 wherein for the bonding region the metal nitride nanolayer has a thickness and the metal aluminum nitride nanolayer has a thickness, and the thickness of the metal aluminum nitride nanolayer being different from the thickness of the metal nitride nanolayer.

77. The process according to claim 69 further including depositing a finishing layer on the outer surface of the coating.

78. The process according to claim 77 wherein the finishing layer comprising one or more layers of one or more of the following: alumina, and nitrides, aluminum nitrides and aluminum carbonitrides of one or more of titanium, niobium, hafnium, vanadium, tantalum, zirconium, chromium alone or in combination with each other or in combination with other metals.

79. The process according to claim 77 further including depositing a lubricious layer on the surface of the finishing layer.

80. The process according to claim 69 wherein the coated member comprising one of the following: a cutting insert, an indexable cutting insert, a drill, a milling cutter, an end mill, a reamer and a tap.

81. The process according to claim 69 further including supplying nitrogen at a pre-selected nitrogen partial flow rate.

82. The process according to claim 81 wherein the nitrogen partial flow rate is below 0.5.

83. The process according to claim 81 wherein the nitrogen partial flow rate is below 0.4.

84. The process according to claim 81 wherein the nitrogen partial flow rate ranges between about 0.35 and about 0.2.

85. The process according to claim 69 wherein the first level of electrical power is less than the second level of electrical power.

86. A process for making a nanolayered coated member, the process comprising the steps of:
providing a substrate having a surface;
providing a metal-aluminum target;
providing a metal-aluminum-carbon target;
rotating a substrate between the metal-aluminum target and the metal-aluminum-carbon target;
supplying electrical power at a first level to the metal-aluminum target;

supplying electrical power at the first level to the metal-aluminum-carbon target;

depositing a coating comprising coating sets of alternating nanolayers on the surface of the substrate;

changing the deposition rate of the alternating nanolayers over a selected period of time during which electrical power supplied to the metal-aluminum target and to the metal-aluminum-carbon target changes from the first level to a second level; and

controlling the deposition rate of the alternating nanolayers for a period of time after the electrical power reaches the second level.

87. The process according to claim 86 wherein the depositing step comprises depositing a plurality of coating sets of alternating nanolayers of metal aluminum nitride and a metal aluminum carbonitride.

88. The process according to claim 86 wherein the depositing step includes depositing a plurality of coating sets of alternating nanolayers of metal aluminum nitride and metal aluminum carbonitride during the time the electric power is increased to the metal-aluminum target and to the metal-aluminum-carbon target so as to deposit a bonding region of the coating.

89. The process according to claim 88 wherein each one of the coating sets included in the bonding region has a thickness and the thickness of the coating sets increases as one moves away from the surface of the substrate.

90. The process according to claim 88 wherein the depositing step further includes depositing a plurality of alternating nanolayers of metal aluminum nitride and metal aluminum carbonitride during the time after the electrical power has reached the second level as to deposit an outer region of the coating.

91. The process according to claim 90 wherein each one of the coating sets included in the outer region has a thickness, and the thickness of the coating sets remaining about equal.

92. The process according to claim 86 wherein the depositing step comprises depositing a plurality of coating sets of alternating layers of metal aluminum nitride and metal aluminum carbonitride so as to form a bonding region.

93. The process according to claim 92 wherein for the bonding region the metal aluminum nitride layer has a thickness and the metal aluminum carbonitride layer has a thickness, and the thickness of the metal aluminum carbonitride layer being different from the thickness of the metal aluminum nitride layer.

94. The process according to claim 86 wherein the depositing step comprises depositing a plurality of coating sets of alternating layers of metal aluminum nitride and metal aluminum carbonitride so as to form an outer region.

95. The process according to claim 94 wherein for the outer region the metal aluminum nitride layer has a thickness and the metal aluminum carbonitride layer has a thickness, and the thickness

of the metal aluminum carbonitride layer being different from the thickness of the metal aluminum nitride layer.

96. The process according to claim 86 further including depositing a finishing layer on the outer surface of the coating.

97. The process according to claim 96 wherein the finishing layer comprising one or more layers of one or more of the following: alumina, and nitrides, aluminum nitrides and aluminum carbonitrides of one or more of titanium, niobium, hafnium, vanadium, tantalum, zirconium, chromium alone or in combination with each other or in combination with other metals.

98. The process according to claim 96 further including depositing a lubricious coating on the surface of the finishing coating.

99. The process according to claim 86 wherein the coated member comprising a cutting insert, a drill, an end mill, a milling cutter, a reamer and a tap.

100. The process according to claim 86 further including supplying nitrogen at a pre-selected nitrogen partial flow rate.

101. The process according to claim 100 wherein the nitrogen partial flow rate is below 0.5.

102. The process according to claim 100 wherein the nitrogen partial flow rate is below 0.4.

103. The process according to claim 100 wherein the nitrogen partial flow rate ranges between about 0.35 and about 0.2.

104. The process according to claim 86 wherein the first level of electrical power is less than the second level of electrical power.

105. A process for making a nanolayered coated member, the process comprising the steps of:

providing a substrate having a surface;

providing a metal target;

providing a metal aluminum target;

providing a metal-aluminum-carbon target;

rotating a substrate between the metal target and the metal aluminum target and the metal-aluminum-carbon;

supplying electrical power at a first level to the metal target;

supplying electrical power at the first level to the metal aluminum target;

supplying electrical power at the first level to the metal-aluminum-carbon target;

depositing a coating comprising coating sets of alternating nanolayers on the surface of the substrate;

changing the deposition rate of the alternating nanolayers over a selected period of time during which electrical power supplied to the metal target and to the metal-aluminum target and to the metal-aluminum-carbon target changes from the first level to a second level; and

controlling the deposition rate of the alternating nanolayers for a period of time after the electrical power reaches the second level.

106. The process according to claim 105 wherein the depositing step comprises depositing a plurality of coating sets of alternating nanolayers of

a metal nitride and a metal aluminum nitride and a metal aluminum carbonitride.

107. The process according to claim 105 wherein the depositing step includes depositing a plurality of coating sets of alternating nanolayers of metal nitride and metal aluminum nitride and a metal aluminum carbonitride during the time the electric power is increased to the metal target and the metal aluminum target and the metal aluminum carbon target so as to deposit a bonding region.

108. The process according to claim 107 wherein for the bonding region each coating set included in the bonding region has a thickness and the thickness of each coating set increases as one moves away from the surface of the substrate.

109. The process according to claim 105 wherein the depositing step further includes depositing a plurality of alternating nanolayers of metal nitride and metal aluminum nitride and metal aluminum carbonitride during the time after the electrical power has reached the second level so as to deposit an outer region.

110. The process according to claim 109 wherein for the outer region each coating set included in the outer region has a thickness, and the thickness of each one of the coating sets remaining about equal.

111. The process according to claim 105 wherein the depositing step comprises depositing a plurality of coating sets of alternating layers of metal nitride and metal aluminum nitride and metal aluminum carbonitride so as to form a bonding region.

112. The process according to claim 111 wherein for each of the coating sets in the bonding region the metal nitride nanolayer has a thickness and the metal aluminum nitride nanolayer has a thickness and the metal aluminum carbonitride nanolayer has a thickness, and the thickness of the metal aluminum nitride layer being different from the thickness of the metal nitride nanolayer and the thickness of the metal aluminum nitride nanolayer being different from the thickness of the metal aluminum carbonitride nanolayer, and the thickness of the metal aluminum nitride nanolayer being different from the thickness of the metal aluminum carbonitride nanolayer.

113. The process according to claim 105 wherein the depositing step comprises depositing a plurality of coating sets of alternating layers of metal nitride and metal aluminum nitride and metal aluminum carbonitride so as to form an outer region.

114. The process according to claim 105 wherein for each of the coating sets in the outer region the metal nitride layer has a thickness and the metal aluminum nitride layer has a thickness and the metal aluminum carbonitride layer has a thickness, and the thickness of the metal aluminum nitride layer being different from the thickness of the metal nitride layer and the thickness of the metal aluminum carbonitride layer, and the thickness of the metal aluminum nitride layer being different from the thickness of the metal aluminum carbonitride layer.

115. The process according to claim 105 further including a depositing a finishing layer on the outer surface of the coating.

116. The process according to claim 115 wherein the finishing layer comprising one or more layers of one or more of the following: alumina and nitrides, aluminum nitrides and aluminum carbonitrides of one or more of titanium, niobium, hafnium, vanadium, tantalum, zirconium, chromium alone or in combination with each other or in combination with other metals.

117. The process according to claim 115 further including depositing a lubricious coating on the surface of the finishing coating.

118. The process according to claim 105 wherein the coated member comprising a cutting insert, a drill, a milling cutter, an end mill, a reamer and a tap.

119. The process according to claim 105 further including supplying nitrogen at a pre-selected nitrogen partial flow rate.

120. The process according to claim 119 wherein the nitrogen partial flow rate is below 0.5.

121. The process according to claim 119 wherein the nitrogen partial flow rate is below 0.4.

122. The process according to claim 119 wherein the nitrogen partial flow rate ranges between about 0.35 and about 0.2.

123. The process according to claim 105 wherein the first level of electrical power is less than the second level of electrical power.

124. A nanolayered coated member comprising:

a substrate having a surface and a coating on the surface of the substrate; and

the coating comprising a plurality of coating sets of nanolayers wherein each coating set comprising alternating nanolayers of titanium aluminum nitride and titanium aluminum carbonitride.

125. The nanolayered coated member according to claim 124 wherein the coating including a bonding region, the bonding region being adjacent to the substrate surface.

126. The nanolayered coated member according to claim 125 wherein the bonding region comprising a plurality of the coating sets wherein the thickness of each coating set increases as one moves away from the surface of the substrate.

127. The nanolayered coated member according to claim 125 wherein the coating including an outer region, the outer region being adjacent to the bonding region.

128. The nanolayered coated member according to claim 125 wherein the outer region comprising a plurality of the coating sets, and wherein the thickness of each one of the coating set being about equal.